

REMARKS

Favorable reconsideration and allowance of the application are requested in view of the foregoing claim amendments and the following remarks.

Claims 69, 70, and 72-77 are pending in the application, with claim 69 being the sole independent claim. By this amendment, the specification has been amended, claims 71 and 72 have been canceled, claims 69 and 72-76 have been amended, and claim 77 is newly presented. Support for the amendments to the specification and to the claims, as well as for the new claim, can be found in the application, as filed. No new matter has been added.

Initially, Applicants' representatives would like to thank Examiner Aftergut for the cordial and productive personal interview conducted on September 14, 2004. At the interview, the outstanding rejections under 35 U.S.C. §§ 112 and 103 were discussed. In addition, Applicants' representatives provided Examiner Aftergut with translations of Japanese Patent Nos. 7-205274 and 55-57429, the two documents applied as art against independent claim 67. Copies of those translations are also being provided herewith. The foregoing amendments are being made in view of the personal interview, and such are earnestly believed to place the application in condition for allowance.

In the outstanding Office Action, claims 72-75 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description and enablement requirements, and under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants traverse these rejections, inasmuch as the term "butted portion," as used in rejected claim 72, is submitted to be adequately described in the original specification, at least at page 58,

and such description would be readily understood by one of ordinary skill in the art to enable the invention. Moreover, the original specification and drawings are definite as to the meaning of the term "butted." Nevertheless, and solely to advance prosecution, claim 72 has been amended herein to recite that leading and trailing ends butt opposite sides of a plane extending through the axis of the columnar member, as discussed at the personal interview. As suggested by the Examiner, similar amendments have also been made to the specification, at page 58, lines 6-9. In light of these amendments, favorable reconsideration and withdrawal of the rejections under Section 112 are respectfully requested.

Regarding art rejections, claims 69, 71, 72, 74, and 76 are rejected under 35 U.S.C. § 103 as being unpatentable over Japanese Patent No. 7-205274 (the '274 patent) in view of Japanese Patent No. 55-57429 (the '429 patent). Also, claims 70 and 76 are rejected under 35 U.S.C. § 103 as being unpatentable over the '274 patent in view of the '429 patent, and further in view of Japanese Patent No. 5-131555 (the '555 patent) and optionally further in view of U.S. Patent No. 2,794,481 to Anderson. These rejections are traversed.

As now recited in independent claim 69, in one aspect of the invention, a method for making a tubular film includes a winding step, a fitting step, and a heating step. In the winding step, a thermoplastic sheet film is wound on a columnar member with at least two turns so that leading and trailing ends of the wound film are positioned approximately on a line normal to an outer surface of the columnar member without overlapping each other. In the fitting step, a tubular molding member is fit over the columnar member with the wound film. A difference between an outer diameter of the columnar member and an inner

diameter of the tubular molding member results in a gap between the columnar member and the tubular molding member when the tubular molding member is fitted over the columnar member and a thermal coefficient of expansion of the columnar member is larger than a thermal coefficient of expansion of the tubular molding member. In the heating step, the columnar member with the wound film and the tubular molding member are heated to a temperature at which the wound film is softened and the gap is narrowed to connect the leading and trailing ends of the wound film thereby forming the wound film into the tubular member having a uniform thickness.

Applicants submit that these features are not taught or suggested by the cited patents, whether those patents are taken alone or in correct combination.

As discussed at the interview, the '274 patent relates to a method for producing a tubular film. According to the method, a film 1 is wound plural times around a film holding jig 2 such that the edges of the film 1 at the starting point and at the end point are disposed at the same position with respect to the circumference of the jig 2. Heat (and in some instances pressure) is then applied locally by a fusion head 4 to the portion of the film at which the starting point and the end point are located to fuse the film at that position.

As also discussed, the '274 patent also mentions an embodiment in which a film, after having undergone localized heating and pressing, "was subjected to post-heating at 350° C for 15 minutes to fuse the film over the entire circumference." Translation of '274 patent, page 9.

The '429 patent relates to a method for producing molded cylindrical polytetrafluoroethylene resin. According to that patent, a central core (mandrel) 2 is inserted into a cylindrical mold 1 and a PTFE sheet A' is rounded and placed in a space 4

between the central core 2 and the cylindrical mold 1. Top and bottom holding molds 3 are then secured to the ends of the cylindrical mold 1. In the opening 4, the edges of the sheet are abutted to one another, or are placed in close proximity to each other. When the mold is heated, the PTFE sheet A' expands in the space of the mold to completely fill the space while the facing portions at both edges are bonded with melting by the expansion pressure of the sheet, thus forming a cylindrical sheet.

The Examiner asserts that, based on the teachings of the '274 patent, one skilled in the art would have wound a film more than once completely about a mandrel such that the ends of the film are disposed at the same circumferential position, and joined the ends of the film via melt bonding. And, based on the teachings of the '429 patent, one skilled in the art would have known that the heat bonding so done could be implemented using an exterior mold and application of heat to the entire sheet. This assertion is respectfully traversed.

The '274 patent teaches multiple turns of a sheet around a mandrel, with localized heating at the edges of the sheet. That patent does not teach or suggest placing a tubular molding member over a sheet film wound with at least two turns on a columnar member, and heating the tubular molding member, the sheet film, and the columnar member. In the '274 patent, the ends of the sheet film are bonded by local heating/pressure. The '429 patent teaches inserting a mandrel into a cylindrical mold member and placing a sheet in the space between the mandrel and the mold. In the space, the ends of the sheet are bonded when the combined elements are heated. In the '429 patent, however, the sheet is only a single sheet. That patent does not teach or suggest winding a sheet film on a columnar member with at least two turns.

Applicants note that the '274 patent does reference a post-heating process for fusing the multiple layers together after the ends are connected. Applicants submit, however, that one of skill in the art would not look to the '429 patent to determine what the post-heating process would entail. For starters, the '429 patent is concerned with making linings for pipes, not with making endless belts for use in, for example, copying machines. Moreover, the post-heating process is to fuse the layers of the multiply wound film, after the ends of the film are bonded. The '429 patent does not have multiple windings and is therefore not concerned with fusing multiple layers of film over a circumference. Instead, the '429 patent teaches bonding the ends of a single sheet of film. To combine the two references to arrive at Applicants invention would be to completely re-engineer the teachings of the two cited references.

Applicants submit, therefore, that there is absolutely no teaching or suggestion in either the '274 patent or the '429 patent that would provide the requisite motivation to one having ordinary skill in the art to combine the cited patents in the manner suggested in the Office Action.

In this regard, it is well settled that the mere fact that teachings found in the prior art could be combined as proposed by the patent Examiner, does not make the combination obvious to one having ordinary skill in the art, absent some teaching, suggestion, or incentive supporting the proposed combination.

Applicants respectfully submit that the Examiner is relying on Applicants' own disclosure as a road map to support such a combination. In other words, the Examiner is resorting to hindsight reconstruction in order to make this combination. Therefore, this combination rejection is not well founded. Applicants submit that there is nothing in the

cited art which supports the position that it can be combined in the manner suggested. Even if the art could be so combined, the mere fact that the art can be combined is not sufficient if there is no suggestion in the art that such a combination is desirable, *see ACS Hospital Systems Inc. v. The Montefiore Hospital*, 221 USPQ 929, 933 (Fed. Cir. 1984).

Moreover, Applicants submit that even if the '274 patent and the '429 patent were considered in combination, that combination fails to teach or suggest many features of Applicants' invention. In particular, neither patent is understood to teach or suggest at least that a difference between an outer diameter of the columnar member and an inner diameter of the tubular molding member results in a gap between the columnar member and the tubular molding member when the tubular molding member is fitted over the columnar member and a thermal coefficient of expansion of the columnar member is larger than a thermal coefficient of expansion of the tubular molding member. Moreover, they do not teach that, in the heating step, the columnar member with the wound film and the tubular molding member are heated to a temperature at which the wound film is softened and the gap is narrowed to connect the leading and trailing ends of the wound film thereby forming the wound film into the tubular member having a uniform thickness. More specifically, in the heating step, the leading and trailing ends of the wound film are connected and the tubular member is formed from the wound film.

For the reasons noted above, Applicants submit that there is no incentive or motivation to combine the cited art in the manner proposed by the Examiner in the above-noted Office Action. Applicants further submit that even if the art were so combined, Applicants' present invention recited in the independent claim would not result.

Applicants further submit that the remaining art cited does not cure the deficiencies noted above with respect to the '274 patent and the '429 patent.

Regarding the remaining art, the '555 patent is understood to be cited merely for teaching that a fiber reinforced thermoplastic resin hollow body is formed between a core made of PTFE and an outer mold produced from a low heat expandable material. The Anderson patent is understood to be cited merely for teaching a core made of PTFE , nylon, phenol formaldehyde with a sisal felt fiber that expands when heated. Nowhere do these patents remedy the deficiencies noted above with respect to the '274 and '429 patents.

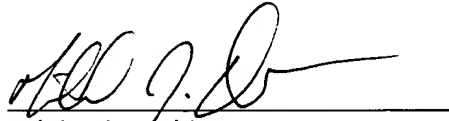
For the foregoing reasons, Applicants submit that the present invention, as recited in independent claim 69, is patentably defined over the cited art, whether that art is taken individually or in combination.

Dependent claims 72-77 should also be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in independent claims 69. Individual and favorable reconsideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael J. Didas", is written over a horizontal line.

Michael J. Didas
Attorney for Applicants
Registration No. 55,112

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

WMW:MJD:eyw

DC_MAIN 180686v1